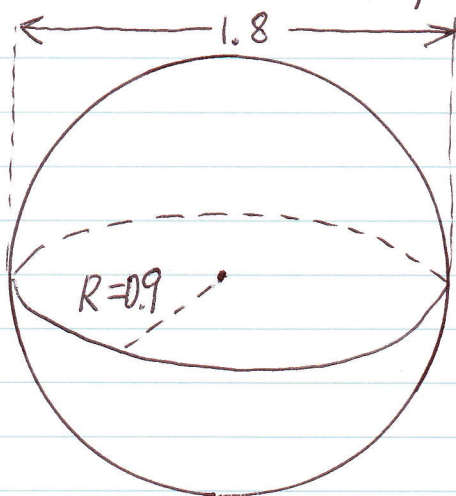


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TOTAL - 10 points



#2 (3 points)

GIVEN: $D = 1.8 \text{ cm}$

$A_o - ?$ $V - ?$

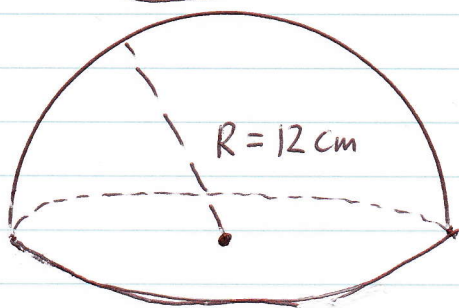
$$R = \frac{D}{2} = \frac{1.8}{2} = 0.9$$

$$A_o = 4\pi R^2 = 4 \cdot 3.14 \cdot 0.9^2 = 10.2 \text{ cm}^2$$

or $A_o = 4\pi R^2 = 4 \cdot 0.9^2 \pi = \underline{3.24\pi \text{ cm}^2}$

$$V = \frac{4}{3}\pi R^3 = \frac{4}{3}\pi \cdot 0.9^3 = \underline{0.972\pi \text{ cm}^3}$$

#3 (5 points)



GIVEN: $R = 12 \text{ cm}$

$A - ?$ $V_{\frac{1}{2}} - ?$

$$A_o = 4\pi R^2 = 4 \cdot 12^2 \cdot \pi = 576\pi \text{ cm}^2$$

$$A_{\frac{1}{2}} = \frac{A_o}{2} = \frac{576\pi}{2} = 288\pi \text{ cm}^2$$

$$A_{\text{circle}} = \pi R^2 = \pi \cdot 12^2 = 144\pi$$

$$A = A_{\frac{1}{2}} + A_{\text{circle}} = 288\pi + 144\pi = \underline{432\pi \text{ cm}^2}$$

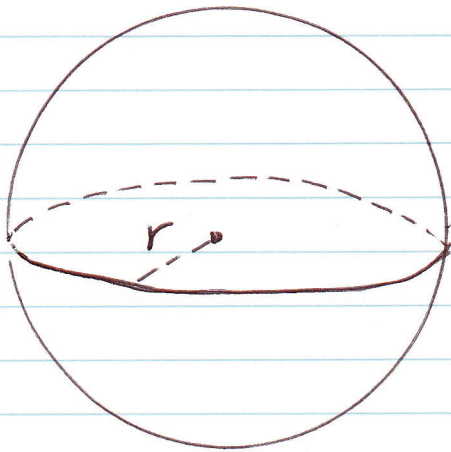
$$V_o = \frac{4}{3}\pi R^3 = 2304\pi \text{ cm}^3$$

$$V_{\frac{1}{2}} = \frac{2304\pi}{2} = \underline{1152\pi \text{ cm}^3}$$

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#4

(2 points)



GIVEN: $A_{\text{circle}} = 40\pi \text{ cm}^2$

$A_{\text{sphere}} = ?$

$$A_{\text{circle}} = \pi R^2$$

$$\pi R^2 = 40\pi ;$$

$$R^2 = 40$$

$$A_{\text{sphere}} = 4\pi R^2 = 4\pi \cdot 40 = \underline{160\pi \text{ cm}^2}$$